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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,656	02/28/2002	Thomas W. Lanzatella	1557.013US1	6894

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EXAMINER

AMSBURY, WAYNE P

ART UNIT	PAPER NUMBER
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2161

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/086,656	Applicant(s) LANZATELLA ET AL.	
	Examiner Wayne Amsbury	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/28/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

CLAIMS 1-17 ARE PENDING

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-8 and 15-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-5 are directed to an abstract method that does not fall within the technological arts, as opposed to a computer-implemented method. Claims 6-8 are directed to an abstract data structure as opposed to a data structure on a computer-readable medium applied to an executable process. Claims 15-17 are directed to abstract plug-in structures as opposed to computer-implemented plug-ins.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 5 and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3 and 5 recite the limitation "the information identifying methods" in line 1. There is insufficient antecedent basis for this limitation in the claim. In view of the central role played by this phrase, claims 3 and 5 cannot be examined with respect to prior art as written. It is also noted that no period appears at the end of claim 3.

It is not clear what is intended by the term "tactical" in **claim 15**, and the Specification simply uses it in the same way as it is used in the claim.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frey, US 6,029,168, 22 February 2000 and Dang et al (Dang), US 6,718,352, 6 April 2004.

Frey teaches that it was well known at the time of the invention to distribute file resource information for all files to each of the servers in a striped file system [COL 2 lines 22-46] in order to maintain file consistency.

An object of Frey is to decentralize descriptive information about files [COL 2 lines 43-54]. It is inherent in these teachings that file descriptive information needs to be placed into a data structure and transmitted from one processor to another.

Frey deals with logical file objects [COL 1 lines 57-64], and the metadata of Frey does include the location of file blocks [COL 4 lines 8-15], which are a component of split characteristics.

As noted in the Specification, at page 17 and elsewhere, it was well known at the time of the invention that quiesce is supported by most file stack elements, with the result that stack elements reach a state of transactional consistency.

However, Frey does not explicitly state that the data transmitted from one node to another in the system includes quiesce capabilities and split characteristics.

Dang is directed to mirroring of data [COL 1 line 7-9 and elsewhere], and explicitly addresses the well-known use of quiesce and split operations [COL 1 lines 43-56; COL 3 line 61 to COL 4 line 9; COL 7 lines 14-17 and lines 44-65]. The data sets involved may be logical in nature [COL 6 lines 24-46]. Dang stores and transmits both data sets and synchronization data [COL 14 line 49 to COL 15 line 13; COL 3 lines 6-18] while managing split and duplication operations.

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the quiesce and split operations of Dang to Frey because the quiesce process permits a split to support updating of one mirror copy while another is unchanged [Dang DOL 1 lines 43-56].

However, one of ordinary skill in the art would recognize that it is possible that a node is incapable of carrying out a quiesce operation or fails to have the capacity to split some data object locally.

As to **claim 1**, within the combined system acting in a network as posited by Frey in which the nodes differ in their capabilities, viability of operations depends on the quiesce capabilities and split characteristics available at disparate nodes as noted above. Thus **it would have been obvious** to one of ordinary skill in the art at the time of the invention to store and transmit quiesce capabilities and split characteristics across the network because it is needed to manage synchronization among varying nodes.

The information concerning quiesce and split capacities necessarily includes attributes, and Frey and Dang address storage management in general. Thus the elements of **claims 9-14** are rejected in the analysis above and these claims are rejected on that basis.

4. Claims 2 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The purpose of synchronization in general and metadata such as quiesce and split information is to place data objects in a state of transactional consistency [as noted by Frey and above].

However, the identification of methods as claimed as a component of the transmitted information is neither anticipated nor suggested by the prior art of record.

5. Claims 6-8 and 15-17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, and/or 35 U.S.C. 101 set forth in this Office action.

The purpose of synchronization in general and metadata such as quiesce and split information is to place data objects in a state of transactional consistency [as noted by Frey and above]. However, the identification of methods and syntax information as claimed as a component of the transmitted information is neither anticipated nor suggested by the prior art of record.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne Amsbury whose telephone number is 571-272-4015. The examiner can normally be reached on M-F 6-18:30 FIRST WEEK.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2161

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WPA


WAYNE AMSBURY
PRIMARY PATENT EXAMINER